

Claims

- [c1] 1. A reagent article, which comprises:
a holder; and
a premeasured single use quantity of at least one lyophilized RNase associated with the holder.
- [c2] 2. The article of claim 1 wherein the holder is selected from the group consisting of vials, tubes, sticks, strips and swabs.
- [c3] 3. The article of claim 2 wherein the holder is a centrifuge tube.
- [c4] 4. The article of claim 1 wherein the at least one RNase is selected from the group consisting of RNase A, RNase H, RNase I, RNase T1, RNase III, and mixtures thereof.
- [c5] 5. The article of claim 4 wherein the at least one RNase comprises a mixture of RNase A and RNase T1.
- [c6] 6. The article of claim 1 which further comprises another reagent selected from the group consisting of buffers, salts and mixtures thereof.
- [c7] 7. A biological kit, which comprises: a. at least one reagent article comprising: a holder; and a premeasured

single use quantity of at least one lyophilized RNase associated with the holder; and b. at least one other component selected from the group consisting of other reagent components and reagent equipment.

- [c8] 8. The kit of claim 7 wherein the holder is a centrifuge tube containing the at least one RNase.
- [c9] 9. The kit of claim 8 wherein the at least one other reagent component is selected from the group consisting of buffers, salts, chaotropic agents, lysis agents and liquid organic solvents; and wherein the at least one equipment component is selected from the group consisting of tubes and filters.
- [c10] 10. The kit of claim 9 which comprises a plurality of reagent articles, and wherein the at least one other reagent component comprises buffers, salts, chaotropic agents and lysis agents, and wherein the at least one equipment component comprises a plurality of filters.
- [c11] 11. The kit of claim 9 which further comprises instructions for use associated therewith.
- [c12] 12. The kit of claim 11 wherein the instructions describe a method for removing contaminating RNA from a biological sample containing DNA.

- [c13] 13. The kit of claim 11 wherein the instructions are written on at least one sheet of paper.
- [c14] 14. The kit of claim 11 wherein the instructions are provided on computer software.
- [c15] 15. A method for removing contaminating RNA from a biological sample containing DNA, the method comprising the steps of:
- a. providing a biological sample containing DNA and contaminating RNA;
 - b. providing a single use reagent article comprising: an RNase holder; and at least one lyophilized RNase associated with holder that is capable of, and in a premeasured single use quantity sufficient to, degrade at least a portion of the contaminating RNA in the biological sample;
 - c. combining the at least one RNase from the reagent with the biological sample so as to form a solution thereof;
 - d. incubating the solution for a period of time and under conditions sufficient to degrade at least a portion of the contaminating RNA; and
 - e. separating the degraded RNA in the solution from the DNA.
- [c16] 16. The method of claim 15 wherein the holder is a centrifuge tube that contains the at least one RNase, and

wherein steps (3) and (4) are carried out in the tube.

[c17] 17. The method of claim 15 wherein steps (c) through (e) are repeated out one or more times.

[c18] 18. The method of claim 15 wherein the biological sample is subjected to treatment with a lysis agent prior to step (a).

[c19] 19. A method for isolating DNA in a biological sample containing contaminating RNA, which comprises the steps of:

- a. providing a buffered solution of the biological sample containing DNA and contaminating RNA;
- b. adding the buffered solution to a reagent article comprising: a centrifuge tube; and at least one lyophilized RNase in the tube that is capable of, and in a premeasured single use quantity sufficient to, degrade at least a portion of the contaminating RNA in the buffered solution;
- c. after step (b), incubating the buffered solution for a period of time and under conditions sufficient to degrade at least a portion of the contaminating RNA;
- d. after step (c), adding an effective amount of a chaotropic agent to the buffered solution to release at least a portion of the DNA;
- e. after step (d), adding a portion of liquid organic sol-

vent to the buffered solution;
f. after step (e), centrifuging the buffered solution to form a supernatant liquid comprising the degraded RNA, and a residual solid comprising the released DNA; and
g. separating the supernatant liquid from the residual solid.

[c20] 20. The method of claim 19 wherein the biological sample is subjected to treatment with a lysis agent prior to step (a).

[c21] 21. The method of claim 20 which comprises the further step (h) of washing the residual solid with a second portion of liquid organic solvent.

[c22] 22. The method of claim 21 wherein the second portion of solvent comprises ethanol.

[c23] 23. The method of claim 22 which comprises the further steps after step (h) of:

i. providing a second reagent article comprising: a second centrifuge tube; and at least one lyophilized RNase in the second tube that is capable of, and in a second premeasured single use quantity different sufficient to, degrade at least a portion of the remaining contaminating RNA in the washed solid;

j. adding a second buffered solution to the second tube

to suspend the second quantity of at least one RNase in the second buffered solution;

k. adding the second buffered solution to first tube containing the residual solid;

l. after step (k), incubating the second buffered solution for a period of time and under conditions sufficient to degrade at least an additional portion of the remaining contaminating RNA;

m. after step (l), adding a second effective amount of a chaotropic agent to the second buffered solution to release additional DNA;

n. after step (m), adding a third portion of liquid organic solvent to the second buffered solution; and

o. after step (n), centrifuging the second buffered solution to form a second supernatant liquid comprising the additional degraded RNA, and a second residual solid comprising the combined released DNA; and

p. separating the second supernatant liquid from the second residual solid.

[c24] 24. The method of claim 23 wherein the first and second quantity of at least one RNase each comprise a mixture of RNase A and RNase T1.

[c25] 25. The method of claim 23 wherein the second quantity of at least one lyophilized RNase is a different from the first premeasured quantity of at least one lyophilized

RNase.

- [c26] 26. The method of claim 24 wherein the first and second buffered solutions each comprise tris(hydroxymethyl) aminomethane.
- [c27] 27. The method of claim 26 wherein the first and third portions of solvent each comprise isopropanol.
- [c28] 28. The method of claim 27 wherein the first and second amounts of chaotropic agent each comprise a mixture of isopropanol, sodium iodide and guanidine thiocyanate.